

Problem 3.4 Multiplication With Mixed Numbers

- A.** Use what you know about equivalence and multiplying fractions to first estimate, and then determine, the following products.

1. $2\frac{1}{2} \times 1\frac{1}{6}$

2. $3\frac{4}{5} \times \frac{1}{4}$

3. $\frac{3}{4} \times 16$

4. $\frac{5}{3} \times 2$

5. $1\frac{1}{3} \times 3\frac{6}{7}$

6. $\frac{1}{4} \times \frac{9}{4}$

- B.** Choose two problems from Question A. Draw a picture to prove that your calculations make sense.

- C.** Takoda answers Question A part (1) by doing the following:

$$\left(2 \times 1\frac{1}{6}\right) + \left(\frac{1}{2} \times 1\frac{1}{6}\right)$$

1. Do you think Takoda's strategy works? Explain.
 2. Try Takoda's strategy on parts (2) and (5) in Question A. Does his strategy work? Why or why not?
- D.** For parts (1)–(3), find a value for N so that the product of $1\frac{1}{2} \times N$ is:
1. between 0 and $1\frac{1}{2}$
 2. $1\frac{1}{2}$
 3. between $1\frac{1}{2}$ and 2
 4. Describe when a product will be less than each of the two factors.
 5. Describe when a product will be greater than each of the two factors.

ACE Homework starts on page 40.

3.5 Writing a Multiplication Algorithm



TEKS / TAKS

6(13)A Make conjectures from sets of examples.

6(13)B Validate conclusions using mathematical relationships.

Recall that an algorithm is a reliable mathematical procedure. You have developed algorithms for adding and subtracting fractions. Now you will develop an algorithm for multiplying fractions.